



OPINION

# BART PERKINS

## Power to the People's Devices

The new USB Power Delivery spec turns the capabilities of the USB port on their head.

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**A** REVOLUTION IS about to come to the most unlikely of places: those hundreds, maybe thousands, of USB ports scattered throughout your company. This revolution will be all about power distribution and management, the stuff that only interests IT infrastructure

staff. But there are wider implications that should make the entire IT organization take notice.

The specification for USB Power Delivery (USB PD) was released nearly two years ago, but devices designed around this standard will only start to appear later this year. The new spec turns the capabilities of the USB port on their head. What was a data interface capable of delivering power will become a power provider with a data interface. Current USB ports provide only 10 watts; devices conforming to the new standard will transmit up to 100 watts. Larger, more complex devices will be able to run with only USB power.

Here's how USB PD will affect IT:

■ **It's green.** According to a California Energy Commission study, office equipment accounts for 17% of electricity consumption in small commercial office buildings. Most office equipment operates internally on DC power, which must be converted from the building's AC power. While Energy Star power supplies must be at least 80% efficient, some low-end devices are only 65% efficient. USB PD devices reduce energy consumption by delivering direct current in the voltage required for the specific device. It's as if Thomas Edison is having the last laugh nearly a century after Nikola Tesla won the AC/DC power wars.

The USB PD specification mandates that DC current flows in both directions. This allows a computer, monitor and other devices connected through USB cables to receive power from a single AC power supply. And that means less energy is wasted converting power. In addition, it allows the device with the most power in its battery to

provide power to the other devices. For example, a laptop could power a phone until its battery is drained and then be powered by that same phone.

New construction could include two sets of wiring to take advantage of USB PD's energy efficiency. One would carry AC power for appliances with large motors. The second would deliver DC current for tablets, phones and other DC-powered electronics. No conversion needed.

■ **There's less clutter.** Most offices contain a maze of power cords and cables connecting different devices to various power sources. Even organizations that install neat cabling usually find that the clutter grows over time as devices are added. Providing power and connectivity through the same cable significantly reduces the number of cords to manage. This looks neater and means there's less to untangle when changes must be made. More important, USB cables are less expensive than the power supplies they will replace.

■ **Travel is easier.** Travel becomes easier when all devices can be powered from a single power supply with a USB connection on the end. There should be no need to lug a separate charger for each device everywhere. Or worse, to discover at a customer site that you do not have the one power supply you desperately need. As USB PD becomes more common, office buildings, airplanes and hotels will offer direct USB plugs, potentially eliminating the need to carry power supplies.

Now is the time to begin determining how to capitalize on USB PD and what resources, transition plans and infrastructure changes you'll need. Early adoption earns green cred and long green. ♦